Please amend the following paragraph of the specification in the manner indicated:

[0023] The database 11 can be implemented in a relational database or an object database. Contrary to the conventional transaction records, the transaction records 111 are partitioned according to the definition of time scale with each weighted record 112 belonging to a partition. Thus, the partition identity field is used to identify each transaction record 111 and weighted record 112. The implementation of both transaction records 111 and weighted records 112 described above is not limited to a single table, but also to multiple related tables. A transaction record 111 preferably comprises three fields, partition identity, transaction identity, and items, the transaction identity field being a primary key used to identify the record, the items field storing at least one transaction object. The weighted record 112 stores the information of time scale and the weighted value corresponding to each partition, preferably comprising partition identity, time scale, and weight fields. The itemset records 113 store the results of the association mining, both temporary and final, preferably comprising itemset, ~~initiated~~ initiate partition, and correlation value fields. Consistent with the scope and spirit of the invention, additional or different fields may be provided.

[0028] FIG. 4 is a diagram of exemplary P.sub.1 partition transactions according to the invention. In phase 1, the association analysis unit 13 reads 4 transactions of the partition P1 as shown in FIG. 3, subsequently generates 2-itemsets {AD,BC,BD,CD} as shown in FIG. 4, calculates the

frequency of each 2-itemset and records initiate ~~initiated~~ partitions to P1. The association analysis unit 13 subsequent reads the weighted value of the partition P1 from the weighted record 112, as shown in FIG. 2, and calculates weighted frequency (denoted as X.sub.2.count) for each 2-itemset. Equation (1) shows the formula for calculating weighted frequency of 2-itemset.

[0033] where min_supp(P1) is the weighted min_supp value of P1, N(P1) is the sum of transactions in P1 and W(P1) is the weighted value of P1. Since there are four transactions in P1, the weighted min_supp value is min_supp(P1) =0.3*4*0.5=0.6. Such a weighted minimum support is referred to as the filtering threshold. Itemsets with weighted frequencies less than the filtering threshold are removed. Thus, as shown in FIG. 4, only ~~{BC,CD}~~ {BC,BD}, marked by "O", remain as candidate itemsets (of type β in this phase since they are newly generated) whose information is recorded to itemset record 113 and then carried over to the next phase P2 for subsequent process.

[0034] FIG. 5 is a diagram of exemplary P.sub.2 partition transactions according to the invention. In phase 2, the association analysis unit 13 reads itemset record 113 to retrieve 2-itemsets {BC,BD} as type a candidate itemsets. After that, it subsequently scans partition P2 as shown in FIG. 2, generates 2-itemsets {AB,AC,BE,CD,CE,DE} except type α candidate itemsets, and records the initiate ~~initiated~~ partitions P2. Weighted frequency of both type α

and type β candidate itemsets is calculated using different formula according to the initiate partition.

[0051] Then, in step S62, 2-itemsets are acquired as candidate itemsets from the transaction record 111 and the itemset record 113. Type α candidate itemsets {BC,BD} are read from the itemset record 113 whose <u>initiate</u> ~~initiated~~ partitions are P1. Type β candidate itemsets {AB,AC,BE,CD,CE,DE} are generated from the transaction record 111 whose <u>initiate</u> ~~initiated~~ partitions are P2.